IN THE CLAIMS:

The following is a complete listing of claims in this application.

- 1. (currently amended) Capping device (1) for a neck (70) of a receptacle (7) with an axis of symmetry (71), typically a bottle, comprising a threaded upper portion (700) with height Hf provided with at least one thread with N turns and a lower portion or crimping ring (701), using a screw sealing cap (8) provided with a head (82) and a metallic crimpable skirt (80), the said device (1) comprising a capping head (2) capable of rotating at a rotation speed Ω using a rotation means (13), about an axis of rotation (20) common with the said axis of symmetry (71), and with axial displacement, so as to move whereby the said capping head (2) is moved closer to the said neck (70) typically fixed in the axial direction, during the said capping operation, characterised in that wherein:
- a) the said capping head (2) is provided with a means of screwing the said cap (8) to the said threaded upper portion (700) of the said neck (70), and a means of crimping the said skirt (80) under the said crimping ring (701), the said axial displacement comprising a first axial displacement of the said capping head (2) activating the said screwing means and a second axial displacement of the said capping head (2) activating the said capping head (2) activating the said crimping means, the screwing means comprising a spring R0 (60) applying the force F0 on the head of the cap (8),
- b) the said screwing means rotates the said cap (8) with respect to the said neck (70), during the said first displacement, the said screwing means comprising a means applying a force FO on the said head (82) of the said cap (8) varying typically from 20 N to 150 N, during all or part of the said screwing step,

so as to have whereby a screwing step and a crimping step forming constitute the said capping operation, in a single axial displacement of the said capping head (2).

2. (currently amended) Device according to claim 1 in which the said screwing means rotates the said cap (8) with a rotation speed typically close to the said rotation speed Ω of the said capping head (2).

Claim 3 (canceled).

- 4. (currently amended) Device according to claim 1, in which the said crimping means includes at least two arms or lifting beams (40), each arm (40) carrying a crimping roller (41) at its lower end, articulated so that it can be brought closer to the said neck (70) during the said crimping step and moved away from the said neck (70) during the said screwing step.
- 5. (currently amended) Device according to claim 1, in which the said capping head (2) includes a means, typically a spring R2 (42) for applying a force F2 on the said head (82) of the said cap (8), typically varying from 500 N to 1500 N after the said screwing step and during all or part of the said crimping step.
- 6. (currently amended) Device according to claim 5, in which the said means for applying the said force F2 is typically activated before the said rollers (41) are applied in contact with the said skirt in order to crimp the said skirt (80), so as to and axially compress the said cap (8) in contact with the said neck (70) and its sealing ring, particularly optionally when the said cap (8) comprises a compressible seal (81) to be compressed before the crimping step in order to seal the said cap (8) on the said neck (70).
- 7. (currently amended) Device according to claim 4, in which the $\frac{1}{2}$ capping head (2) comprises:

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- a) a support C3 (3), typically cylindrical, solidarised to a fixed frame (10), capable of turning about the said axis of rotation (20) with the said rotation speed Ω typically predetermined and possibly optionally constant, and moving in the axial direction with respect to the said neck (70) with an axial displacement D3,
- b) a coaxial tubular body C2 (4) internal to the said support C3 (3) and coaxial with it, but capable of moving axially with respect to the said support C3 (3) with an axial displacement D2, the said support C3 (3) comprising a lower stop (30) to limit the axial displacement of the said tubular body C2 (4) and applying a force F2 on the said tubular body C2 (4), typically using a spring R2 (42),
- c) a central body C1 (5), coaxial with the said tubular body C2 (4), typically hollow, solidarised to the said tubular body C2 (4) for the said displacement D2 typically by means of a set of bearings, typically needle bearings (45), the said tubular body C2 (4) forming a hub for the said central body C1 (5) acting as an axle,
- d) a means for partial coupling of the said tubular body C2 (4) and the said central body C1 (5) in rotation, rotation of the said tubular body C2 (4) only causing a rotation of the said central body C1 (5) during the said screwing step, rotation of the said central body C1 (5) possibly optionally being interrupted by the development of an opposing torque C at the end of screwing,
- e) the said central body C1 (5) comprises a bearing part C0 (6) that will cause rotation of the said cap (8) and move axially with respect to the said central body C1 (5) with a displacement D0 typically corresponding to the height of the said threaded portion (700) of the said cap (8), an upper stop (51) for the said bearing part (6) and a spring R0 (60)

applying a force F0 on the $\frac{1}{1}$ bearing part C0 (6) $\frac{1}{1}$ so as to provide coupling of the $\frac{1}{1}$ capping head (2) through the $\frac{1}{1}$ bearing part C0 (6) and the $\frac{1}{1}$ cap (8) in rotation, and to form the $\frac{1}{1}$ screwing means,

- f) the said arms or lifting beams (40) of the said crimping means are axially fixed to the said tubular body C2 (4) and can be rotated due to a secondary rotation axis (44) typically fixed to the said tubular body C2 (4).
- 8. (currently amended) Device according to claim 7 in which the said crimping means includes a cam (32) axially fixed to the said support C3 (3), each of the said typically rigid arms (40) comprising an upper part (400) typically provided with a caster or a wheel or a sliding pad (401), and a roller support arm (402) supporting the said roller (41), such that the said second displacement causes a temporary cooperation of the said cam (32) and the said wheel or pad (401), bringing the said roller (41) closer to the said neck (70) for the said crimping.
- 9. (currently amended) Device according to either claim 7 in which the said support C3 (3) of the said capping head (2) is solidarised to an arm (12), typically horizontal, and is free in rotation with respect to the said arm (12), the said support C3 (3) and the said arm (12) respectively forming an axle / hub assembly, the said arm (12) possibly optionally acting as a support for a motor forming the said rotation means (13) capable of driving the said support C3 (3) in rotation.
- 10. (currently amended) Device according to claim 9 in which the said arm (12) and the said fixed frame (10) cooperate, typically using a vertical column (14) so as to assure the said axial displacement D3 of the support C3 (3) by translation of the said arm (12) in a vertical plane,

typically by means of an auxiliary motor (11) acting as an axial displacement means.

- 11. (currently amended) Device according to claim 9 in which the said arm (12) is placed onboard a rotary turret and forms part of a set of n capping heads (2), where n typically varies from 2 to 12, the supports C3 (3) being engaged to a central gearwheel to rotate the said supports C3.
- 12. (currently amended) Device according to claim 7, in which the said partial rotational coupling means of the said tubular body C2 (4) and the said central body C1 (5) is a magnetic or electromagnetic coupling, typically by means of facing magnets (43, 50) supported by the said tubular body C2 (4) and the said central body C1 (5).
- 13. (currently amended) Device according to claim 7 in which, at the end of the screwing step, the said bearing part CO (6) can be brought into contact with the said upper stop (51) so that the said central body CI (5) and the said tubular body C2 (4) can transmit the said force F2 to the head (82) of the said cap (8).
- 14. (currently amended) Device according to claim 1, in which the rotation speed Ω and displacement speed V of the said capping head (2) during the said first displacement are slaved so as to satisfy the relation $V = Hf.\Omega/N_{\star}$ so as to synchronise thereby synchronizing rotation of the said cap (8) and lowering it onto the neck (70) during the said screwing step, typical values of Hf, Ω and N being between 5 mm and 20 mm for Hf, between 150 rpm and 500 rpm for Ω , and between 10 and 25 turns for N.

Claim 15 (canceled).

16. (currently amended) Method according to claim $\frac{15}{20}$ in which the said cyclic movement of the said capping head (2) is a sinusoidal movement typically obtained by cooperation of

a connecting rod and a crank.

- 17. (currently amended) Method according to claim $\frac{15}{20}$ in which the $\frac{15}{20}$ continuous circular movement $\frac{15}{20}$ obtained using a cam.
- 18. (currently amended) Method according to claim $\frac{15}{20}$ in which the said cyclic movement of the said head is a movement composed of linear parts at constant speed, typically obtained with hydraulic jacks.
- 19. (original) Method according to claim 18 in which the rise time Tr may be is shorter than the lowering time Td, and typically less than half as long.
- 20. (new) Method of capping a bottle having a threaded neck having an axis of symmetry with a screw cap using a capping device comprising a capping head having a rotation axis, comprising the steps of:

placing the bottle facing the head by a horizontal step by step displacement or continuous displacement of the bottle,

aligning the head on the rotation axis and axis of symmetry, and holding the bottle stationary for a time T corresponding to one capping cycle,

subjecting the head to a cyclic movement of duration T with respect to the neck, including lowering the head from a high point to a low point, with a lowering time Td during which the cap was procured and placed on the neck,

during lowering time Td, screwing the cap onto the neck and during a first time Tdv and crimping the cap onto the neck during a second time Tds,

causing the head to rise during rise time Tr after the lowering time, and

displacing the capped bottle, and replacing the capped bottle with a bottle to be capped when the head is at the high point.

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